APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/846,452	04/30/2001	Han C. Wen	3997P007	4448

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EXAMINER
DUONG, DUC T

ART UNIT	PAPER NUMBER
2663	

DATE MAILED: 01/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 September 2005*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10 and 12-25* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10 and 12-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

       1.☐ Certified copies of the priority documents have been received.

       2.☐ Certified copies of the priority documents have been received in Application No. _____.

       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *10/14/05*.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims 1-10 and 12-25 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Aoki et al (US Patent 6,757,255 B1) in view of Ruutu et al (US Patent

6,219,713 B1).

Regarding to claim 1, Aoki discloses a method (fig. 12), comprising applying

predictions of congestion conditions (obtaining a round trip time RTT) for a traffic stream

(TCP) in a communication network (col. 11 lines 29-33) to increase an initial congestion

window size for the traffic stream (col. 14 lines 43-48); the window size is increased

after the slow start phase); and applying dynamic bandwidth control (calculating an

effective bandwidth) to the traffic stream (col. 11 lines 33-37).

Aoki fails to teach for the initial congestion window is set up to an advertised

window size of a client receiving the traffic stream.

However, Ruutu discloses a method for adjustment of TCP congestion window,

wherein the congestion window 360 is adjusted according to an advertised window size

350 of a receiver 310 (fig. 3 col. 4 lines 53-65).

Thus, it would have been obvious to a person or ordinary skill in the art, at the

time of the invention, to employ an advertise window of a receiver as taught by Ruutu in

Aoki's system to provide a more accurate and faster response to the changing network

conditions.

Regarding to claims 9 and 20, Aoki discloses a communication network 1 (fig. 1

col. 6 lines 5-7) comprising one or more communication paths (fig. 1 col. 6 lines 17-20)

between one or more content sources 16-18 and one or more clients 16-18 (fig. 1 col. 6

lines 12-16), at least one of the communication paths including a control node 2 (Fig. 2

col. 6 lines 25-33) configured to set an initial congestion window for a traffic stream

(TCP) transmitted over the at least one communication path according to predicted

congestion conditions (a round trip time RTT) for that traffic stream (fig. 12 col. 11 lines

29-33), increased up to an advertised window size of a client receiving the traffic stream

(col. 14 lines 43-48); and to rate limit the traffic stream (calculating an effective

bandwidth) to an effective bandwidth associated with a potentially congested bottleneck

in the at least one communication path over which the traffic stream is transmitted (fig.

12 col. 11 lines 33-37).

Aoki fails to teach for the initial congestion window is set up to an advertised

window size of a client receiving the traffic stream.

However, Ruutu discloses an apparatus for adjustment of TCP congestion

window, wherein the congestion window 360 is adjusted according to an advertised

window size 350 of a receiver 310 (fig. 3 col. 4 lines 53-65).

Thus, it would have been obvious to a person or ordinary skill in the art, at the

time of the invention, to employ an advertise window of a receiver as taught by Ruutu in

Aoki's system to provide a more accurate and faster response to the changing network

conditions.

Regarding to claim 2, Aoki discloses the dynamic bandwidth control comprises

modulating inter-packet bandwidths (calculating the effective bandwidth or transfer

speed) of the traffic stream according to a capacity (number of transmitted packets/time

expended for transmission) of a bottleneck in a communication path through which the

traffic stream passes in the communication network (fig. 13 col. 15 lines 11-35).

Regarding to claims 3 and 15, Aoki discloses the predictions of congestion

conditions are based on one of monitoring packet losses within the communication

network (col. 10 lines 19-36) or monitoring packet round trip time in the communication

network (col. 8 lines 45-65).

Regarding to claim 4, Aoki discloses the monitoring is performed on at least one

of a traffic stream-by traffic stream basis, a connection-by-connection basis, a link-by-

link basis, or a destination-by-destination basis (fig. 3 col. 6 lines 47-55).

Regarding to claims 5 and 16, Aoki discloses the monitoring is performed for a

period between 0 and 100 seconds (fig. 10; noted the difference between the session

start time and the session end time correspond to a period between 0 to 100 seconds).

Regarding to claims 6-8 and 17-19, Aoki and Ruutu discloses all the limitations

with respect to claims 1 and 9, except for the monitoring is performed for a period

between 30 and 100 seconds (claims 6 and 17), 50 and 100 seconds (claims 7 and 18),

and 60 and 100 seconds (claims 8 and 19). However, to arrange a monitoring for a

plurality of intervals of 30 and 100 seconds, 50 and 100 seconds, and 60 and 100

seconds would have been obvious to a person of ordinary skill in the art since such arrangement of monitoring intervals involves only routine skill in the art, thus constituting no new inventive concept.

Regarding to claims 10 and 21 the control node is configured to rate limit the traffic stream by setting a minimum time spacing (a sliding window is uses to establishes the spacing time) between packets within the traffic stream (col. 14 lines 34-43).

Regarding to claims 12 and 22, Aoki discloses the control node is configured to rate limit the traffic stream by setting the effective bandwidth BW equal to a maximum transfer rate (number of transmitted packets/time expended for transmission) allowed by the potentially congested bottleneck in the communication path (fig. 13 col. 15 lines 11-35).

Regarding to claims 13 and 23, Aoki discloses the control node is configured to rate limit the traffic stream by applying a feedback (echo packet) control process to modulate inter-packet bandwidths in the traffic stream (fig. 12 col. 11 lines 21-29).

Regarding to claims 14 and 24, Aoki discloses the feedback control process 4 is applied at a control node 31 upstream of the potentially congested bottleneck in the communication path (fig. 11 col. 11 lines 3-20; the performance measuring device 4 performs the feedback control process).

Regarding to claim 25, Aoki discloses the at least one communication path is selected on the basis of prior packet losses thereon (col. 6 lines 43-47; the performance

measuring device 2 obtains information on the performance of the TCP

communications, the information include packet loss).

Conclusion

3.   Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

4.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Duc T. Duong whose telephone number is 571-272-

3122. The examiner can normally be reached on M-F (9:00 AM-5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Ricky Q. Ngo can be reached on 571-272-3139. The fax phone number for

the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

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Business Center (EBC) at 866-217-9197 (toll-free).

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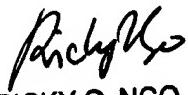
RICKY Q. NGO
SUPERVISORY PATENT EXAMINER